

Appl. No. 10/765,808
Amdt. dated 09/22/2006
Response to Office Action of 07/21/2006

Attorney Docket No.: N1085-00256
[TSMC2003-0899]

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Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

- 1 1. (Currently Amended) A plasma etching apparatus comprising a chuck for
2 retaining a substrate and hardware that is formed of a material that includes oxygen
3 impregnated therein such that said oxygen is released when an etching operation is
4 carried out, wherein said hardware comprises a focus ring and at least a portion of said
5 focus ring substantially continuously extends below a peripheral portion of said chuck.
- 1 2. (Currently Amended). The plasma etching apparatus as in claim 1, wherein said
2 chuck is substantially circular and said ~~hardware comprises a focus ring that~~
3 peripherally surrounds said chuck.
- 1 3. (Currently Amended) The plasma etching apparatus as in claim ~~[[1]]~~ 8, wherein
2 ~~said chuck is substantially circular and said hardware comprises a focus ring that is~~
3 ~~annular in shape and~~ at least a portion of said lower focus ring substantially
4 continuously extends below a peripheral portion of said chuck.
- 1 4. (Original) The plasma etching apparatus as in claim 1, wherein said chuck
2 comprises an electrostatic chuck.
- 1 5. (Original) The plasma etching apparatus as in claim 1, wherein said hardware
2 comprises a focus ring composed primarily of quartz.
- 1 6. (Original) The plasma etching apparatus as in claim 1, wherein said hardware
2 comprises a focus ring formed of a ceramic.

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1 7. (Currently Amended) The plasma etching apparatus as in claim [[2]] 1, further
2 comprising a further focus ring, said focus ring and said further focus ring forming a
3 focus ring set that peripherally surrounds said chuck.

1 8. (Currently Amended) A plasma etching apparatus comprising a chuck for
2 retaining a substrate and a focus ring set, at least one of said chuck and said focus ring
3 set formed of a material that includes oxygen therein such that said oxygen is released
4 when an etching operation is carried out, said focus ring set including an upper focus
5 ring that laterally surrounds said chuck and a lower focus ring disposed completely
6 below said upper focus ring and below said substrate.

1 9. (Currently Amended) The plasma etching apparatus as in claim 1, ~~wherein said~~
2 ~~hardware comprises a focus ring and~~ further comprising said focus ring maintainable at
3 a temperature no greater than a temperature of said substrate while an etching
4 operation is carried out upon said substrate.

1 10. (Original) The plasma etching apparatus as in claim 9, wherein said chuck
2 comprises an electrostatic chuck and said substrate comprises a semiconductor
3 substrate.

1 11. (Original) The plasma etching apparatus as in claim 9, wherein said focus ring
2 maintains contact with said electrostatic chuck and said electrostatic chuck is cooled
3 during said etching operation.

1 12. (Original) The plasma etching apparatus as in claim 11, wherein said focus ring
2 is disposed peripherally around said substrate and includes a portion that rests on an
3 annular landing section of electrostatic chuck.

1 13-28. (Cancelled)

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1 29. (Currently Amended) A plasma etching apparatus comprising a chuck for
2 retaining a substrate and a focus ring peripherally surrounding said chuck and formed of
3 a focus ring material that includes oxygen throughout the focus ring material, such that
4 said oxygen is released when an etching operation is carried out, wherein at least a
5 portion of said focus ring substantially continuously extends below a peripheral portion
6 of said chuck.

1 30. (Previously Presented) A plasma etching apparatus comprising a chuck for
2 retaining a substrate and formed of an oxygen-impregnated material, and a focus ring
3 peripherally surrounding said chuck.

1 31. (Previously Presented) The plasma etching apparatus as in claim 30, wherein
2 said chuck comprises an electrostatic chuck.

1 32. (Previously Presented) The plasma etching apparatus as in claim 31, wherein
2 said chuck is disposed within an etching chamber and further comprising said etching
3 chamber containing therein further hardware formed of said oxygen-impregnated
4 material.

1 33. (Previously Presented) A plasma etching apparatus comprising a chuck for
2 retaining a substrate and a focus ring set ~~peripherally surrounding said chuck and~~
3 ~~formed of a focus ring material that includes oxygen throughout the focus ring~~
4 ~~material[[,]]~~ such that said oxygen is released when an etching operation is carried out,
5 said focus ring set including an upper focus ring that laterally surrounds said chuck and
6 a lower focus ring disposed completely below said upper focus ring and below a portion
7 of said said substrate, at least the lower focus ring maintainable at a temperature no
8 greater than a temperature of said substrate while said etching operation is carried out
9 upon said substrate.